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=> S NANOPARTICLE CORE
         43731 NANOPARTICLE
        321806 CORE
L1         172 NANOPARTICLE CORE
                 (NANOPARTICLE(W)CORE)

=> S L1 AND DENDRON
          1116 DENDRON
L2           5 L1 AND DENDRON

=> D 1-5 BIB ABS

L2   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:1186483  CAPLUS
TI   Hydrogenation of nitrobenzenes catalyzed by platinum nanoparticle
     core-polyaryl ether trisacetic acid ammonium chloride dendrimer
     shell nanocomposite
AU   Yang, Ping; Zhang, Wei; Du, Yukou; Wang, Xiaomei
CS   College of Chemistry and Chemical Engineering, Soochow University, Suzhou,
     215123, Peop. Rep. China
SO   Journal of Molecular Catalysis A: Chemical (2006), 260(1-2), 4-10
     CODEN: JMCCF2; ISSN: 1381-1169
PB   Elsevier B.V.
DT   Journal
LA   English
AB   Platinum nanoparticle core-polyaryl ether trisacetic
     acid ammonium chloride dendrimer shell nanocomposites (Pt@Gn-NACl) were
     prepared and used as catalysts for hydrogenation of nitrobenzenes to
     anilines with mol. hydrogen under mild conditions.  The as-prepared
     nanoparticles have mean particle size from 2.0 to 5.5 nm, depending on the
     molar ratio of the metal and the dendrimer.  The Pt nanoparticles
     demonstrate near-monodisperse when the molar ratio of Pt and G3-NACl is
     below 30.  The interaction among three carboxyl groups terminated at the
     dendron and the metallic core keeps the Pt nanoparticles from
     agglomerating.  The colloidal solution of Pt nanoparticles stabilized by the
     dendrimer, in which the molar ratio of Pt/G3-NACl was less than 60, is
     stable without precipitation for several weeks.  The dendrons attach to the
metal
     core radially, and a substantial fraction of the surface of the metal
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          nanoparticle is unpassivated and available for catalytic reactions.
          Turnover frequencies for the hydrogenation of nitrobenzenes to anilines
          change from 353 to 49 h-1 depending on the dendrimer generation and
          substrates.  The dendrimer catalysts are stable during the catalytic
          hydrogenation process and can be recovered by centrifugation and reused.
          The results suggest the effectiveness of polyaryl ether trisacetic acid
          ammonium chloride dendrimer as a stabilizer for the preparation of Pt
          nanoparticle catalysts.
RE.CNT  35      THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2    ANSWER 2 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN    2006:1145793  CAPLUS
TI    Direct synthesis of CdSe nanoparticles in dendron boxes
AU    Park, Yushin; Taranekar, Prasad; Park, Jinyoung; Baba, Akira; Fulghum,
      Timothy; Advincula, Rigoberto
CS    Department of Chemistry, University of Houston, Houston, TX, 77002, USA
SO    Abstracts, 62nd Southwest Regional Meeting of the American Chemical
      Society, Houston, TX, United States, October 19-22 (2006), SRM-429
      Publisher: American Chemical Society, Washington, D. C.
      CODEN: 69INSW
DT    Conference; Meeting Abstract
LA    English
AB    CdSe quantum dots capped with carbazole containing ligands were directly
      synthesized and subsequent electropolymn. of the carbazole units was
      performed.  The carbazole containing ligands decomposed at temps. greater than
      300°C, thus the CdSe nanoparticles were directly synthesized from
      cadmium acetate, selenium powder, and the carbazole ligand by heating at
      270°C.  The nanoparticles were then analyzed by UV showing
      absorption peaks at wavelengths of 320, 350nm attributed to the carbazole
      ligands and absorption at 550nm attributed to the CdSe
      nanoparticle core.  The diameter of CdSe nanoparticles was
      calculated to be about 3.5nm based on the UV absorbance.  Fluorescence
      measurements showed two emission peaks, the first from the carbazole units
      at 370nm and the second from the nanoparticle at 590nm, when an excitation
      of 320nm was used.  This is assumed to be due to energy transfer from the
      peripheral carbazole units to CdSe nanoparticle core.
      The fluorescence intensity of the carbazole units decreased as the solution
      concentration increased, possibly arising from self-quenching of carbazole
      ligand.  Electropolymn. by CV methods from -0.2V to 0.8V was used to
      polymerize the carbazole units.  An oxidation peak appeared around 0.6V.  UV
      and fluorescence measurements were used to check for the presence of both
      polycarbazole and the CdSe nanoparticles.  The absorbance peak at 350nm
      red shifted and broadened from the formation of polycarbazole while the
      CdSe peak remained unchanged, the change from carbazole to polycarbazole
      was also visible in the fluorescence spectra.

L2    ANSWER 3 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN    2006:609043  CAPLUS
DN    145:256888
TI    A route to redox-active nanoparticle-cored dendrimers: post-encapsulation
      of ferrocene
AU    Shon, Young-Seok; Choi, Daeock
CS    Department of Chemistry, Western Kentucky University, Bowling Green, KY,
      42101, USA
SO    Chemistry Letters (2006), 35(6), 644-645
      CODEN: CMLTAG; ISSN: 0366-7022
PB    Chemical Society of Japan
DT    Journal
LA    English
OS    CASREACT 145:256888
AB    Redox-active nanoparticle-cored dendrimers were synthesized by a stepwise
      reaction, in which synthesis of functionalized nanoparticles was followed
      by organic reactions to build dendritic architecture around a
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     nanoparticle core.  Incorporation of redox mols. on the
     surface of nanoparticles resulted in the formation of a redox-active
     nanoparticle-cored dendrimer.
RE.CNT  15    THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 4 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2006:249265  CAPLUS
TI   Magnetic nano-reactors with high regioselectivity
AU   Duanmu, Chuansong; Stevens, Philip; Zheng, Yan; Gao, Yong
CS   Department of Chemistry and Biochemistry, Southern Illinois University,
     Carbondale, IL, 62901, USA
SO   Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United
     States, March 26-30, 2006 (2006), ORGN-551 Publisher: American Chemical
     Society, Washington, D. C.
     CODEN: 69HYEC
DT   Conference; Meeting Abstract; (computer optical disk)
LA   English
AB   Our group has investigated the use of dendron-coated maghemite
     nanoparticles as magnetically recoverable reactors for promoting C-C
     formations with high regio-selectivity.  A 12 nm-sized maghemite
     nanocrystals were coated with Simanek(melamine)-type dendrons and a Pd
     catalyst.  The dendron mols. served as a "gate" for controlling
     the accessibility of the reagents towards the surface-immobilized Pd
     catalyst.  By varying the generation of dendron ligands, the
     ratio of dendron/Pd catalyst, and the size of the
     nanoparticle core, we could tune up the selectivity of
     our nano-reactors towards Suzuki cross-coupling reactions.  In addition, we
     were able to recover such magnetic nano-reactors via magnetic concentration for
     repeated uses.

L2   ANSWER 5 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2005:741772  CAPLUS
TI   Convergent synthesis of dendron-functionalized gold
     nanoparticles
AU   Choi, Daeock; Chinn, Laura E.; Shon, Young-Seok
CS   Department of Chemistry, Sunchon National University, Suncheon, 540-742,
     S. Korea
SO   Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United
     States, Aug. 28-Sept. 1, 2005 (2005), PMSE-434 Publisher: American
     Chemical Society, Washington, D. C.
     CODEN: 69HFCL
DT   Conference; Meeting Abstract; (computer optical disk)
LA   English
AB   Dendrimers provided some of the most versatile building blocks used in the
     construction of three-dimensional organic/inorg. nanostructures.  Significant
     progress has been made in research involving the use of dendritic
     frameworks to surround functional core mols.  Nanoparticle-cored dendrimer
     (NCD) represents an organic-inorg. hybrid nanostructure with a
     nanoparticle core and well-defined dendritic wedges.
     The use of dendritic scaffolds to surround a nanoparticle represents an
     important advance because it might offer an enhanced stability and
     well-defined property to the novel nanomaterials.  Our approach is based
     on a strategy in which the synthesis of monolayer-protected clusters
     (MPCs) is followed by adding dendrons on MPCs.  This synthetic approach
     will not only eliminate the need for a large excess of dendronized thiols
     but also result in the intact core size for the NCDs with different
     generations and various wedge densities.  FT-IR, NMR, UV-vis spectroscopy,
     thermogravimetric anal. (TGA), and transmission electron microscopy (TEM)
     are used for the characterization of these hybrid nanoparticles.


=> S CROSSLINKED DENDRON#
        105755 CROSSLINKED
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           1686 DENDRON#
L3            2 CROSSLINKED DENDRON#
                 (CROSSLINKED(W)DENDRON#)

=> D 1-2 BIB ABS

L3   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2004:311079  CAPLUS
DN   140:340365
TI   Nanocrystals in ligand boxes exhibiting enhanced chemical, photochemical
     and thermal stability, and methods of making the same
IN   Peng, Xiaogang; Chen, Haiyan; Guo, Wenzhou; Wang, Y. Andrew
PA   The Board of Trustees of the University of Arkansas, USA
SO   PCT Int. Appl., 76 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ---------------     ----   --------    --------------------     --------
PI   WO 2004031732        A2    20040415    WO 2003-US31461          20031003
     WO 2004031732        A3    20050414
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
             OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003279807        A1    20040423    AU 2003-279807           20031003
     US 2005004293        A1    20050106    US 2003-679247           20031003
PRAI US 2002-417796P      P     20021003
     WO 2003-US31461      W     20031003
AB   Dendron ligands or other branched ligands with crosslinkable groups were
     coordinated to colloidal inorg. nanoparticles, including nanocrystals, and
     substantially globally crosslinked through different strategies, such as
     ring-closing metathesis (RCM), dendrimer-bridging methods, and the like.
     This global crosslinking reaction sealed each nanocrystal within a dendron
     box to yield box-nanocrystals which showed dramatically enhanced stability
     against chemical, photochem. and thermal treatments in comparison to the non-
     crosslinked dendron-nanocrystals.  Empty dendron boxes
     possessing a very narrow size distribution were formed by the dissoln. of
     the inorg. nanocrystals contained therein upon acid or other etching
     treatments.

L3   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2003:757905  CAPLUS
DN   139:266325
TI   Synthesis of stable colloidal nanocrystals using organic dendrons
IN   Peng, Xiaogang; Chen, Haiyan
PA   The Board of Trustees of the University of Arkansas, N.A., USA;
     Nanomaterials and Nanofabrication Laboratories
SO   PCT Int. Appl., 37 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.          DATE
     ---------------     ----   --------    --------------------     --------
PI   WO 2003078699        A2    20030925    WO 2002-US15320          20020514
     WO 2003078699        A3    20040129
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         WO 2003078699          A9    20040325
             W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
                 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
                 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
                 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
                 RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
                 VN, YU, ZA, ZW
             RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
                 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
                 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
                 GN, GQ, GW, ML, MR, NE, SN, TD, TG
         US 2004101976          A1    20040527   US 2002-146420         20020513
         US 7153703             B2    20061226
         CA 2446878             A1    20030925   CA 2002-2446878        20020514
         AU 2002367579          A1    20030929   AU 2002-367579         20020514
         EP 1402089             A2    20040331   EP 2002-807072         20020514
             R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
         JP 2005519836          T     20050707   JP 2003-576685         20020514
PRAI US 2001-290541P        P     20010514
     US 2002-146420         A     20020513
     WO 2002-US15320        W     20020514
AB   A method for stabilizing colloidal suspensions of nanocrystals or
     nanoparticles in a solvent or solid matrix is provided by coating the
     nanocrystals with bulky organic mols., specifically dendrons.  By coating
     nanocrystals with a dense organic dendron coat and further crosslinking the
     dendron ligands, oxidation of the nanocrystals and dissociation of the ligands
     are avoided.  This invention allows nanocrystals to undergo rigorous
     purification and processing.  It may regularly be applied to a variety of
     nanocrystals.
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